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## (54) IMPROVEMENTS RELATING TO MOTOR CYCLE SAFETY HELMETS

(71) We, STADIUM LIMITED, a British Company of Queensway, Enfield, Middlesex, EN3 4SD, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to draught excluders which can be added to the type of crash helmet which encloses the head of the wearer, and has an opening adjacent the eyes of the wearer. This type of helmet requires a large space to permit the head to be inserted, and for ease of application of the helmet the excess space lies between the chin and the front lower edge of the helmet, when worn. During riding, ram air passes upwards through this space, causing an uncomfortable cold draught, and at sufficiently high speed the pressure of the ram air can force the helmet to rotate backwards from the head.

In accordance with the present invention a crash helmet of the type which encloses the head of the wearer, and has an opening adjacent the eyes of the wearer, is provided with a draught excluder which can be releasably fastened to cover the substantially segmentally shaped area between the front lower edge of the helmet and the chin of the wearer. The releasable fastening can be between the draught excluder and the helmet, and/or different portions making up the draught excluder.

One exemplary and preferred combination of the type of helmet referred to, and a draught excluder, is described below with reference to the accompanying drawings in which:—

Figure 1 is a perspective view of the helmet and draught excluder when worn; and,

Figure 2 is an underneath plan, without the wearer, the draught excluder being shown in an unfastened condition.

The helmet comprises a one-piece, gener-

ally dome shaped body 10 which is of rigid plastics material. The interior has cushioning pads 12, and straps 14 for fastening under the chin. A transparent visor 16 hinges on pivots 18 to a down position in which it covers an opening 20 in the body 10.

As can be seen from the broken line in Figure 1 there is a substantial space 22 in the vicinity of the wearer's chin. When the wearer is riding at speed, cold ram air passes up through this space, causing an uncomfortable draught, which can be strong enough to rotate the helmet backwards.

In accordance with this invention there is a draught excluder, constituted in this example by two flaps 24 and 26. These are of substantially similar shape to one another, having a curved edge which is permanently attached to the dome of the helmet by fixing around the curved edge 28. Each flap is otherwise bounded by two straight edges 30 and 32 which lie at substantial angles, for example 70 to 100°, to one another. Adjacent the region 34 at the middle of the front of the helmet, the two edges 32 of the flaps overlap, and strips of releasably attachable material, for example "Velcro" (Registered Trade Mark), are fixed to the abutting surfaces of the two flaps. The flaps are of very pliable material such as PVC.

Figure 2 shows how the flaps can be turned back to permit the helmet to be passed over the head. The flaps are then simply pressed upwards against the chin, causing the two strips of "Velcro" to interlock. As seen in Figure 1, when fastened the flaps cover the generally segmentally shaped area adjacent the front lower edge of the helmet, thus covering the chin and preventing cold ram air from passing up to the wearer's face. The "Velcro" strips have substantial widths, permitting the flaps to be fastened in the overlapped condition within a substantial range of positions—thus accommodating a range of chin sizes, beards and giving a variable degree of draught exclusion.

The "Velcro" fastening can easily be un-

done in the event of an accident, permitting the helmet to be removed from the head of an unconscious rider.

- 5 Alternative arrangements of draught excluders may comprise one-piece, segmentally shaped members. They can be permanently attached—perhaps by stitching—to one side of the helmet front, and releasably fastenable to the other, perhaps through press studs, 10 “Velcro” strips, or a zip. Although in the helmet shown the flaps are attached to the interior of the helmet shell, that is not essential, the excluder flap or flaps could be tailored to fit over the outside of the shell.
- 15 As alternatives to the permanent attaching of the one, or the two piece arrangements, the excluder can be fastenable to the helmet by releasable fasteners such as press studs or zips.
- 20 As alternatives to P.V.C. the excluder could be of equally pliable materials such as woven canvas or leather.

#### WHAT WE CLAIM IS:—

- 25 1. A crash helmet of the type which encloses the head of the wearer, having an opening adjacent the eyes of the wearer, and a draught excluder which can be releasably fastened to cover the substantially segmen- 30 tally shaped area between the front lower edge of the helmet and the chin of the wearer.
2. The combination according to claim

1 in which the draught excluder is a one-piece member.

3. The combination according to claim 1 or claim 2 in which the draught excluder is attached to the helmet by a quick release fastening.

4. The combination according to claim 1 or claim 2 in which the draught excluder is permanently attached to the helmet.

5. The combination according to claims 1, 3 or 4 in which the draught excluder comprises two flaps.

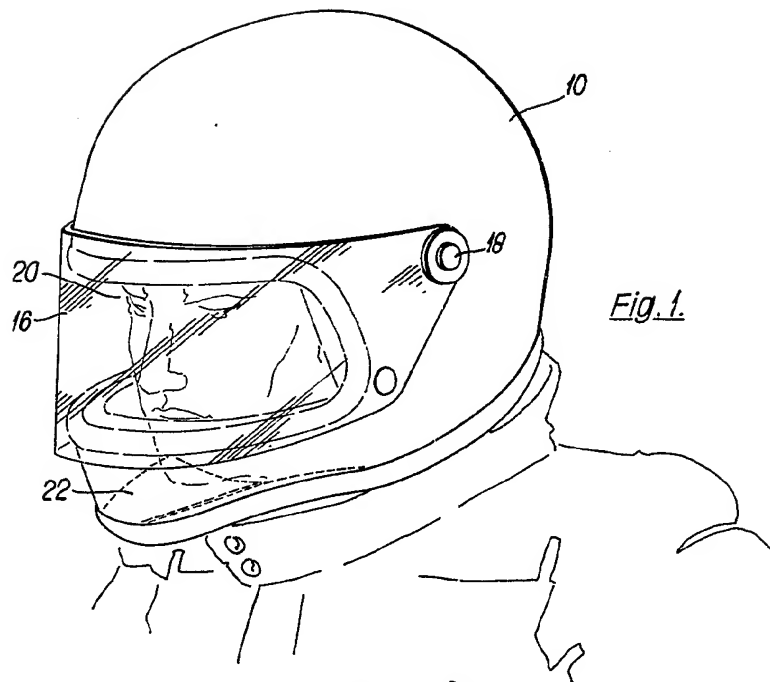
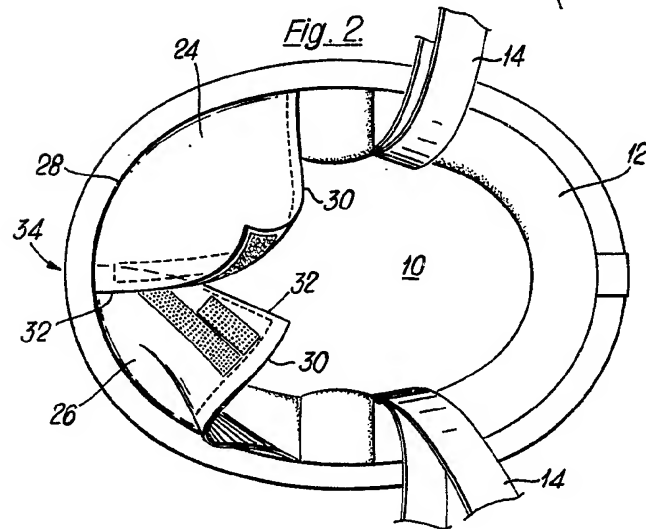
6. The combination according to claim 5 in which the two flaps overlap over a portion extending back radially from the middle of the front of the helmet.

7. The combination according to claim 5 or claim 6 in which the two flaps can be fastened to one another by two strips of releasably mutually attachable materials on the respective overlapping portions.

8. The combination according to any of claims 1 to 7 in which the draught excluder is of very pliable material.

9. The combination substantially as described with reference to the accompanying drawings.

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*Fig. 1.**Fig. 2.*